Public Review Draft for Update 2013 of the California Water Plan

R.L. Schafer [rschafer@rlsmap.com]

Sent: Wednesday, October 23, 2013 6:22 PM
To: DWR CWP Comments; Moeller, Lewis@DWR
Cc: David Orth [dorth@krcd.org]; dan vink [dvink@ltrid.org]; Sean Geivet (sgeivet@ocsnet.net); Steve Drumright [sdrumrightvid@yahoo.com]; wbricker@jgboswell.com; Ronald D. Jacobsma (rjacobsma@friantwaterEO.onmicrosoft.com); davidd@4-creeks.com
Attachments: ACWA Spring Conference- TF~1.pdf (6 MB) ; SREP-Summary.pdf (11 KB) ; SWAP Final PDF 09-30-13.pdf (205 KB)

In the Department of Water Resources Tulare Lake Regional Forum conducted Friday, October 18, 2013, you provided an overview of Update 2013 Public Review Draft by telephone, which by the way, was not affective, you needed to be there in person.

The purpose of this email is to question the priorities and goals of the Draft Update 2013 Objectives. The Objectives handout included 17 separate headings, none of which stated **Surface Water Supply and Storage**. I am appalled that the Department of Water Resources of the State of California, did not identify Surface Water Supply and Storage as an objective, but included such statements as Practice Environmental Stewardship and Ensure Equitable Distribution of Benefits. I would suggest that you reevaluate your entire list of objectives and redevelop them more in line with the purpose of a California Water Plan.

Objective 6, Improve Flood Management Using an Integrated Water Management Approach is the closest objective listed that might include coverage of additional storage for flood protection in the Tulare Lake Basin, but it falls short of real examples. Attached for your consideration is a one page Fact Sheet on "Tule River, California, Success Reservoir Enlargement Project" which has been in the making for 20 years, and approved for construction by contract of federal, state and local agencies, but due to the Corps mismanagement of safety issues on Success Dam remains dormant. I believe the Success Reservoir Enlargement Project (SREP) that would double the flood protection for the City of Porterville and downstream agricultural lands and provide an additional 28,000 a.f. of water conservation storage space deserves recognition in the California Water Plan.

Also, I am further disappointed that the California Water Plan does not mention additional surface water storage on the San Joaquin River through the construction of Temperance Flat Reservoir. As a result I communicated with Mr. Ronald D. Jacobsma, General Manager, Friant Water Users Authority and obtained a copy (attached) of a Power Point presentation made at the 2013 Spring ACWA Conference for your consideration of the inclusion of a portion in the 2013 California Water Plan.

In addition, attached is a copy of the Association of California Water Agencies (ACWA) Statewide Water Action Plan for the Governor and the State of California for reference in development of appropriate objectives.

In conclusion, I recommend you refer to the California Water Plans developed in the 1980s under the leadership of Director David Kennedy and reevaluate your Draft 2013 Objectives.

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Revised January 2007
Revised October 2013

TULE RIVER, CALIFORNIA
SUCCESS RESERVOIR ENLARGEMENT PROJECT
FACT SHEET

Purpose

The Tule River, Success Reservoir Enlargement Project (SREP) is a Corps of Engineers flood control project that involves the raising of the existing spillway of Success Dam 10 feet and lengthening the spillway 165 feet to obtain 28,000 acre-feet of additional flood control and water conservation storage space. The enlargement project increases the storage space in Success Reservoir from 82,000 to 110,000 acre-feet, an increase of 34 percent. The additional storage space improves the flood protection for the City of Porterville (45,000 population) and the highly developed downstream agricultural lands from a return period flood event occurring once in 47 years to a return period flood event occurring once in 100 years. In other words, the proposed project more than doubles the flood protection for the City of Porterville and downstream lands.

Authorizations

The U. S. Army Corps of Engineers designed, constructed and operates the Success Dam and Reservoir on Tule River under the 1944 Flood Control Act. Following the enactment of the Water Resources Development Act of 1986, Public Law 99-662, the Tule River Association proceeded as the local non-federal cost sharing partner for the reconnaissance and feasibility studies under such Act. The SREP was conditionally authorized in Section 101(b)(4) of the Water Resources Development Act of 1999, Public Law 106-53, subject to a favorable report by the Chief of the Corps of Engineers, which occurred on 23 December 1999.

The State of California, The Reclamation Board, approved participation as the non-federal sponsor for construction of the SREP in June 1999. The State of California legislature authorized the SREP by AB 1147 in 2000, and approved 70 percent State funding of the non-federal cost of the flood control benefit of the project. The member units of the Tule River Association have agreed to pay the non-federal cost of the irrigation water storage benefit of the SREP.

The Design Agreement between the Department of the Army and Tule River Association and State of California for Design of the Tule River, Success Enlargement Project was entered 18 January 2001. The Project Cooperation Agreement (PCA) between the Department of the Army and State of California, The Reclamation Board and Lower Tule River Irrigation District for Improvements to the Success Dam, Tule River, California, for Flood Control, Agricultural Water Supply Storage, and Dam Safety Assurance was entered into 20 June 2003.

Schedule and Funding

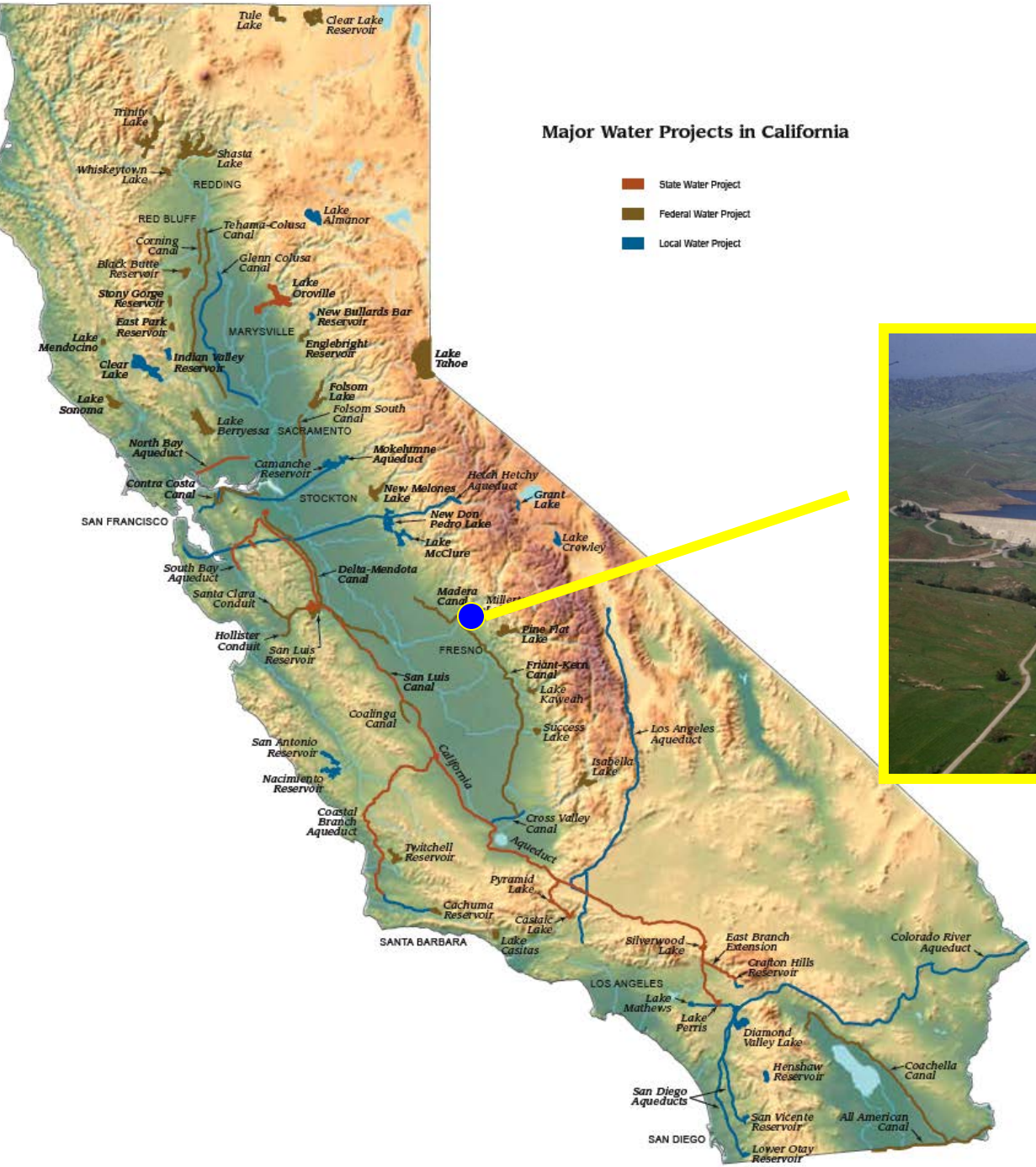
The Preconstruction Engineering and Design (PED) phase of the SREP by the Corps of Engineers, at a cost of $2,000,000, was scheduled to be complete in 2003, but remains under development as of this date. The Congress appropriated $400,000 in FY 2001 for PED. The Congress further appropriated for the SREP construction $1,125,000 in FY 2002, $2,000,000 in FY 2003 and $1,850,000 in FY 2004, but none thereafter. The SREP was placed on hold in late FY 2005 until the Success Dam seismic safety issue was resolved. After eight additional years of investigation, evaluations, technical reviews and a Baseline Risk Assessment by the Corps, the seismic, along with seepage, are now labeled as “Tolerable Risks” for Success Dam.

The State legislature appropriated the State's share of the cost of PED in FY 2001 of $238,175 and budgeted $335,000 for construction in FY 2002. The Governor's budget included for SREP construction $1,531,000 in FY 2003 and $1,500,000 in FY 2004, but no funds were included in the FY 2005 state budget or thereafter since the SREP was placed on hold by the Corps.

The local non-federal sponsors, composed of the City of Porterville, the Tule River Association, the Tulare County Flood Control District, the County of Kings and the Tulare Lake Basin Water Storage District, have agreed upon an apportionment of the local non-federal cost share and provided the funds to date as required for the design and construction of the SREP.

The construction cost of the SREP as of 2007 was estimated to be $31,154,000, with a cost share of $20,250,100 by the Federal government, $7,101,490 by the State of California and $3,802,410 by the local non-federal sponsors.

Friant Division
CalFed Surface Storage
Temperance Flat
May 8, 2013



By
Ronald D. Jacobsma
General Manager
Friant Water Authority

Friant Division Service Area and Contractors

Service Area

Merced County
Madera County
Fresno County
Tulare County
Kern County

1,200,000 Acres
15,000 Farmers
$4B+ Ag Economy

Ag Water Contractors

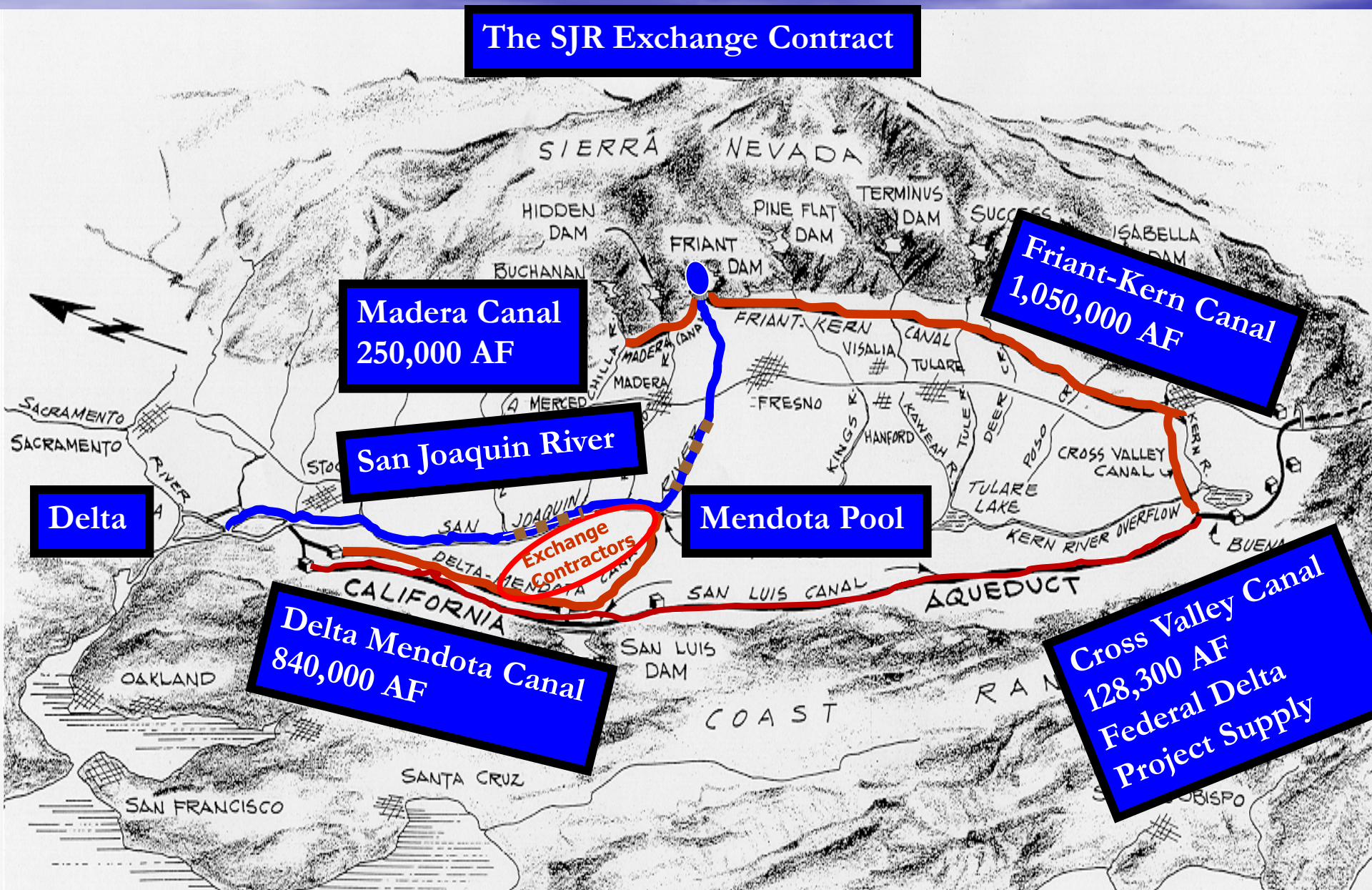
Alpaugh I.D.
Arvin-Edison W.S.D.
Atwell Island W.D.
Chowchilla W.D.
Delano-Earlimart I.D.
Exeter I.D.
Fresno I.D.
Garfield W.D.
Hills Valley I.D.
International W.D.
Porterville I.D.
Rag Gulch W.D.
Saucelito I.D.
Shafter-Wasco I.D.
Southern San Joaquin M.U.D.
Stone Corral I.D.
Tea Pot Dome W.D.
Terra Bella I.D.
Tulare I.D.

Ivanhoe I.D.
Kaweah-Delta WCD
Kern-Tulare W.D.
Lewis Creek W.D.
Lindmore I.D.
Lindsay-Strathmore I.D.
Lower Tule River I.D.
Madera I.D.
Orange Cove I.D.
Pixley I.D.

M&I Contractors

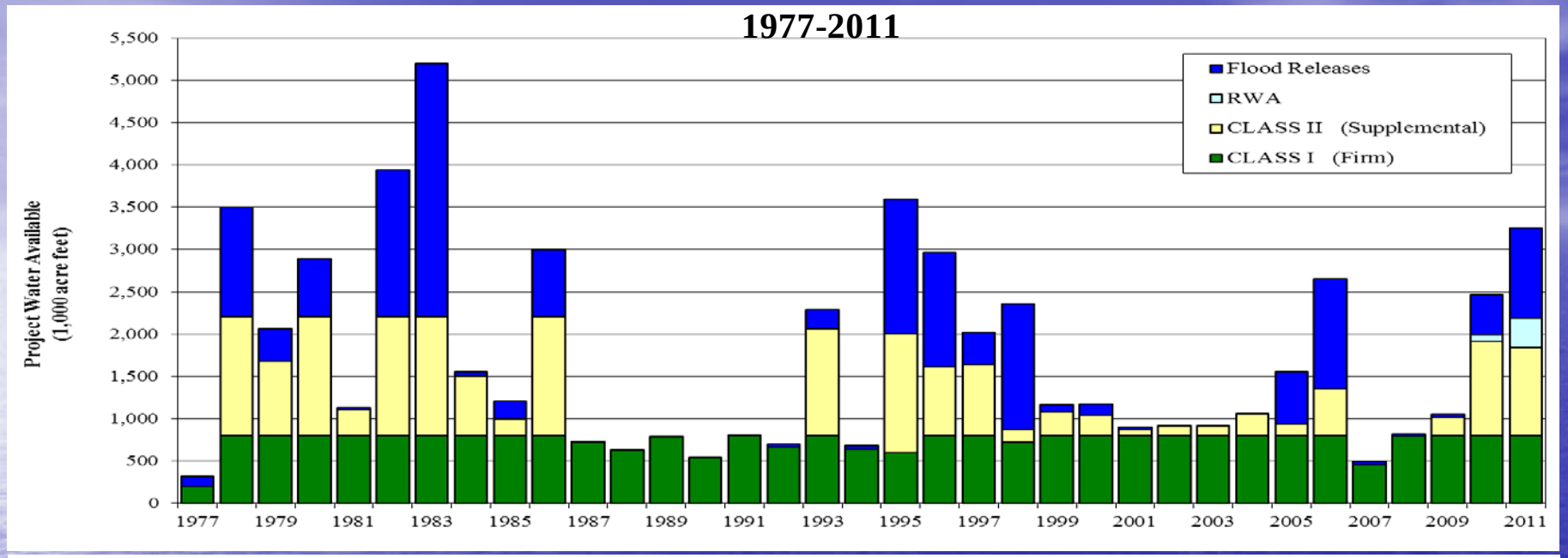
City of Fresno
City of Orange Cove
City of Lindsay
Fresno Co. WWD #18
Madera County

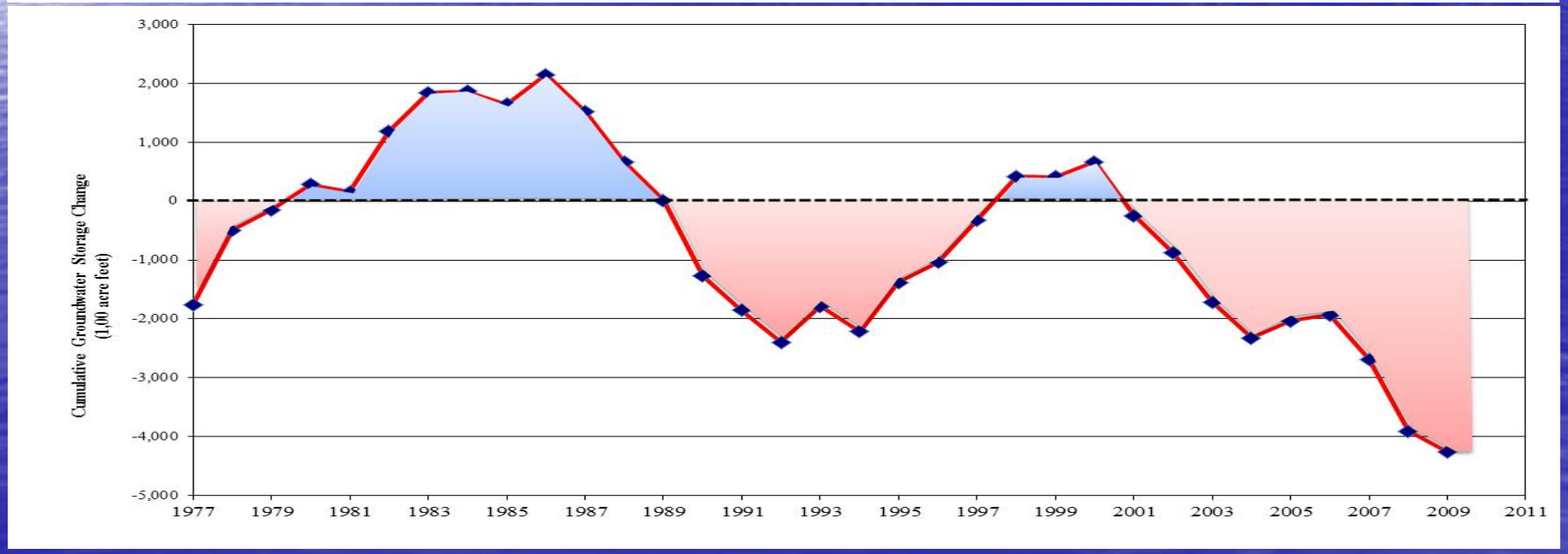
How The Friant Division Works

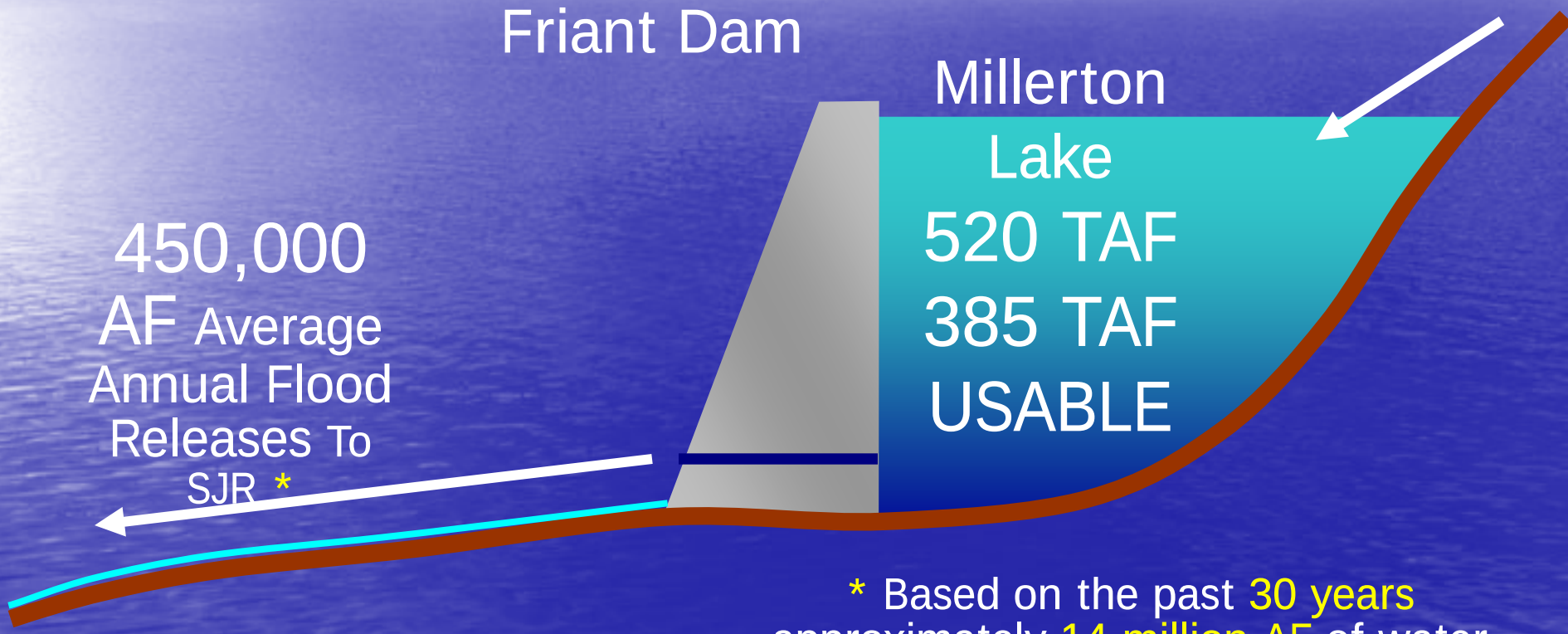


Friant Division
Water Supply and Groundwater Storage Change

1977-2011



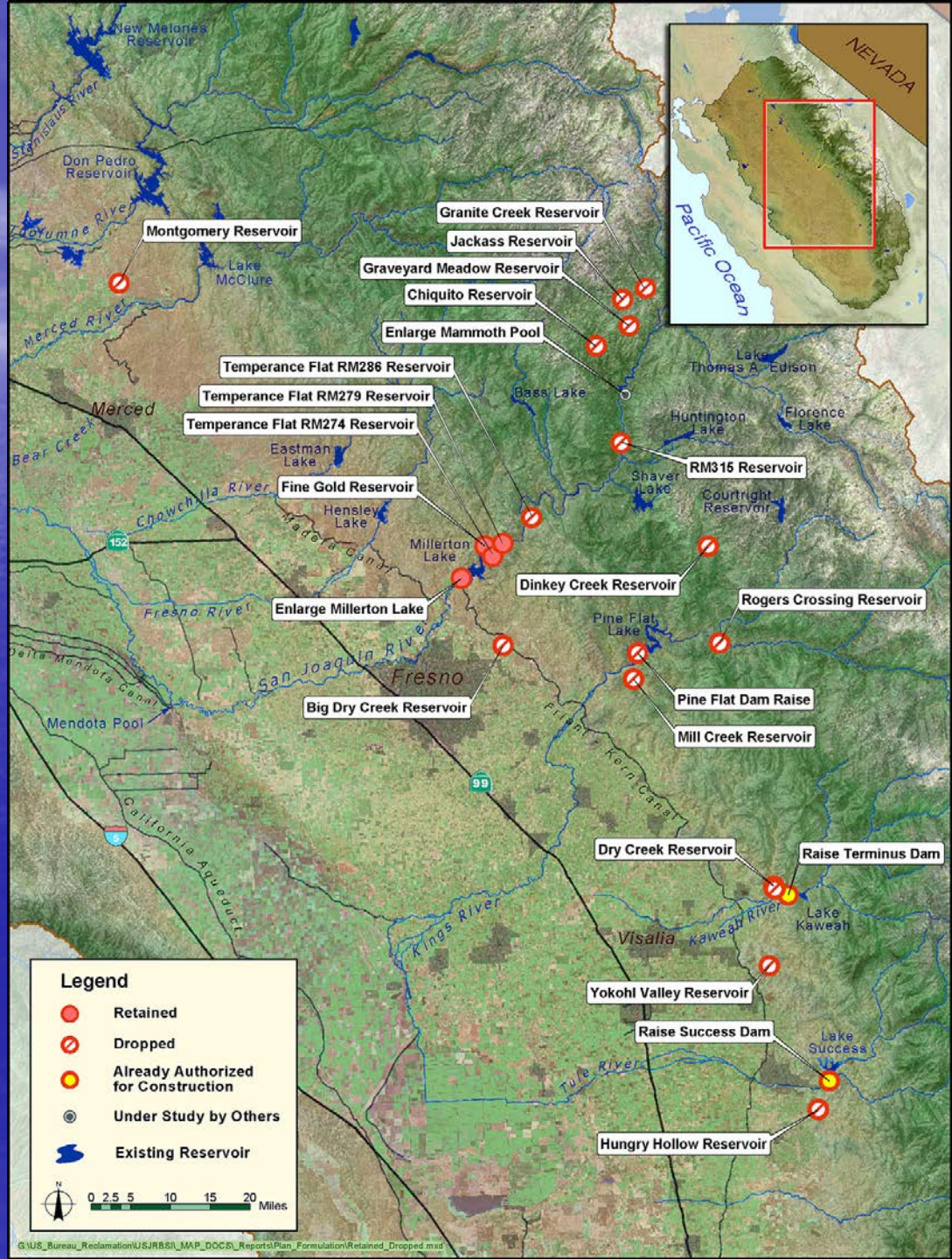




* Based on the past 30 years approximately 14 million AF of water supplies have been lost

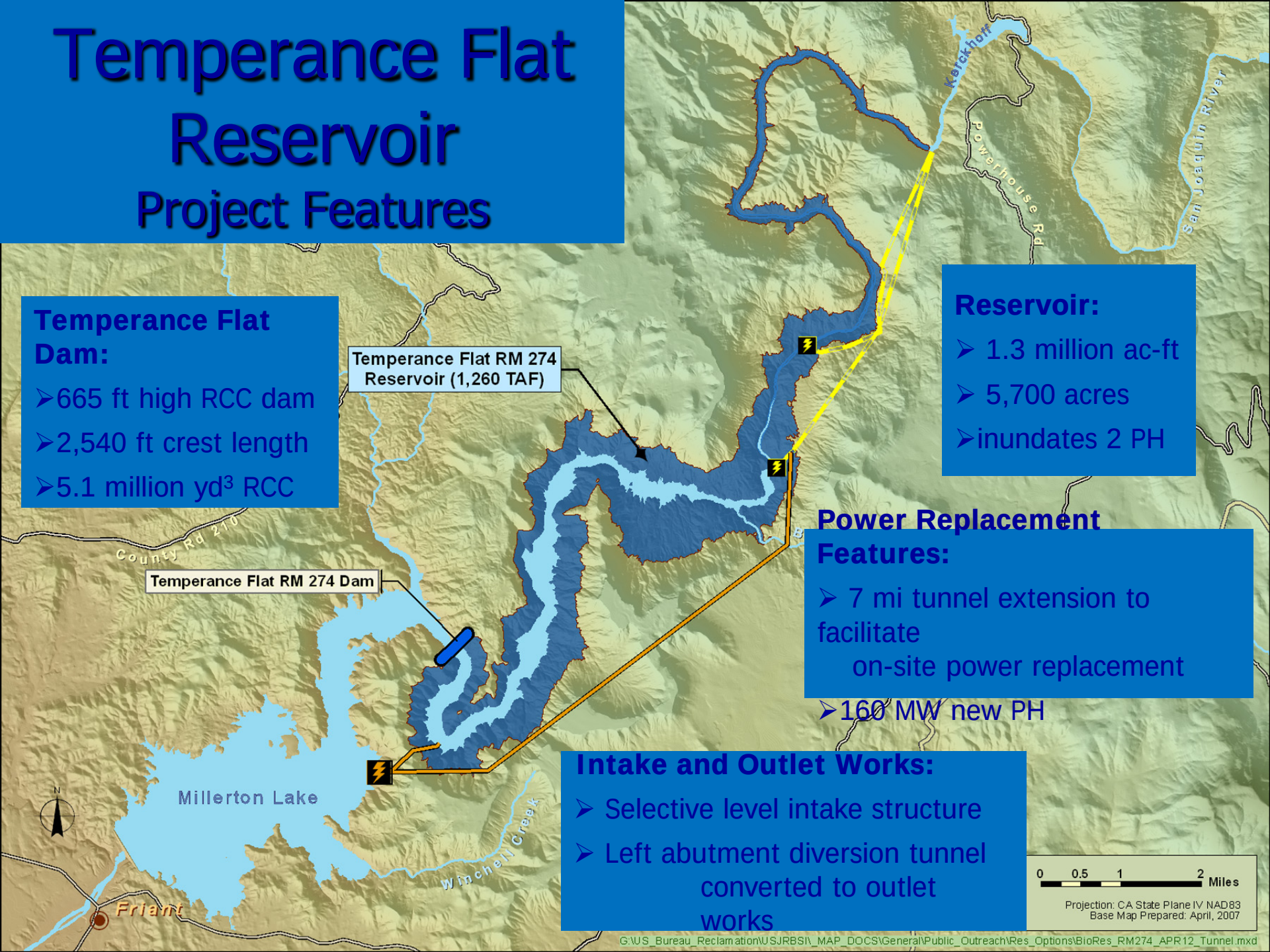
Temperance Flat Site was Selected Through Extensive Review

- CALFED initial surface water storage screening
- 22 Reservoir sites reviewed in multi-step screening
  - Phase 1
    - 17 sites to 6
  - Public Scoping
    - added 5 more sites
  - Initial Alternatives
    - 11 sites to 4
  - Plan Formulation
    - 4 sites to 1
  - Feasibility
    - multiple alternatives at one reservoir site



Temperance Flat Reservoir

Project Features



Temperance Flat Dam:

- 665 ft high RCC dam
- 2,540 ft crest length
- 5.1 million yd^3 RCC

Reservoir:

- 1.3 million ac-ft
- 5,700 acres
- inundates 2 PH

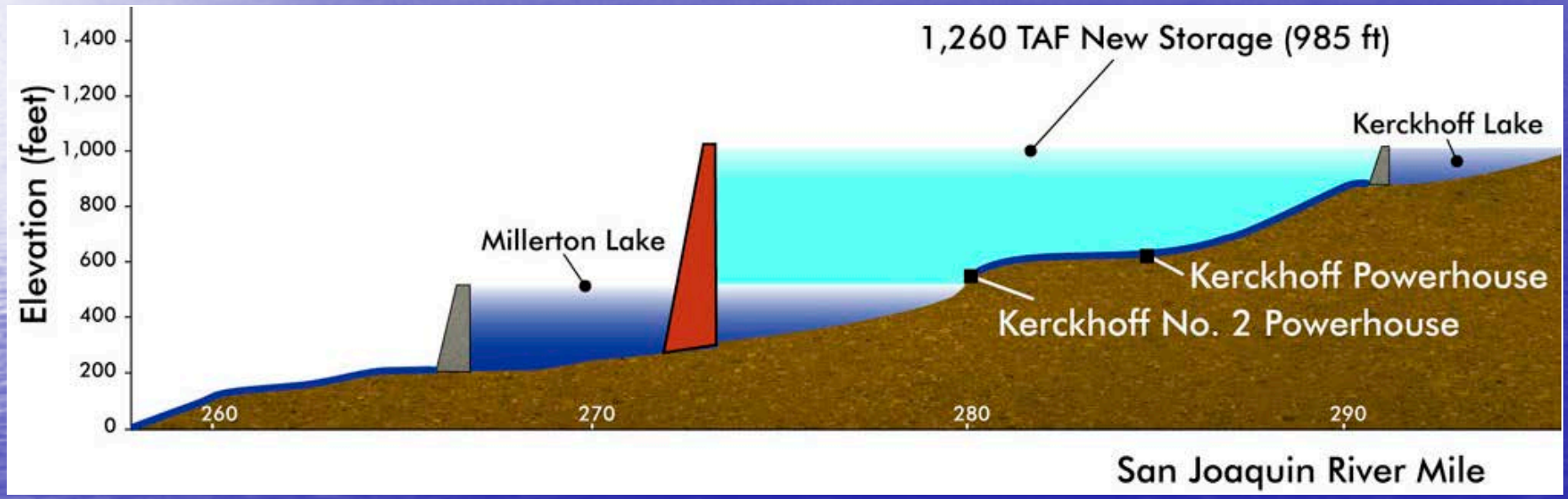
Power Replacement Features:

- 7 mi tunnel extension to facilitate on-site power replacement
- 160 MW new PH

Intake and Outlet Works:

- Selective level intake structure
- Left abutment diversion tunnel converted to outlet works

Temperance Flat Dam would be constructed in the upper portion of Millerton Lake with water depths ranging from 100-200 feet

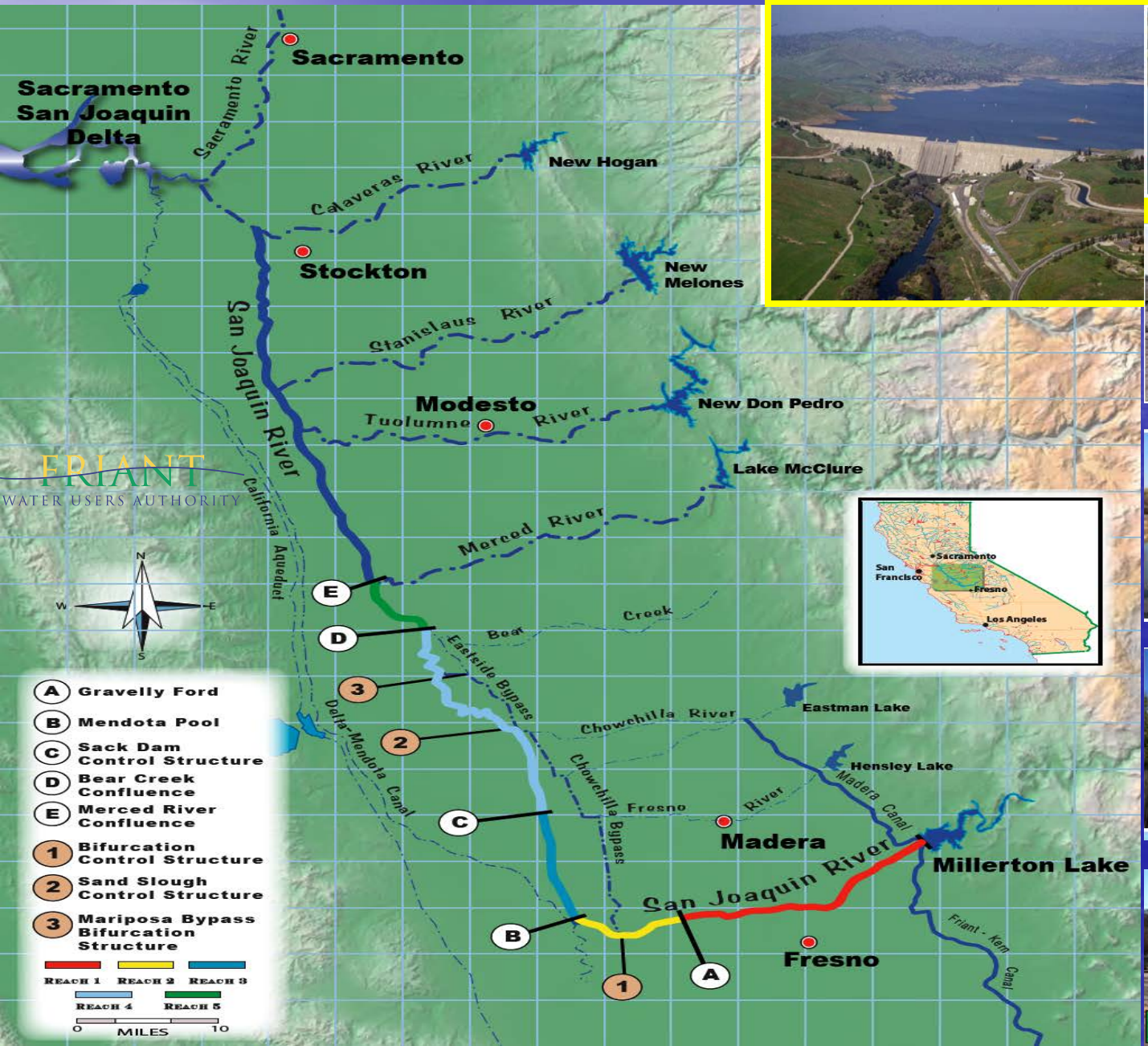


- Requires additional large cofferdams
- Requires power replacement

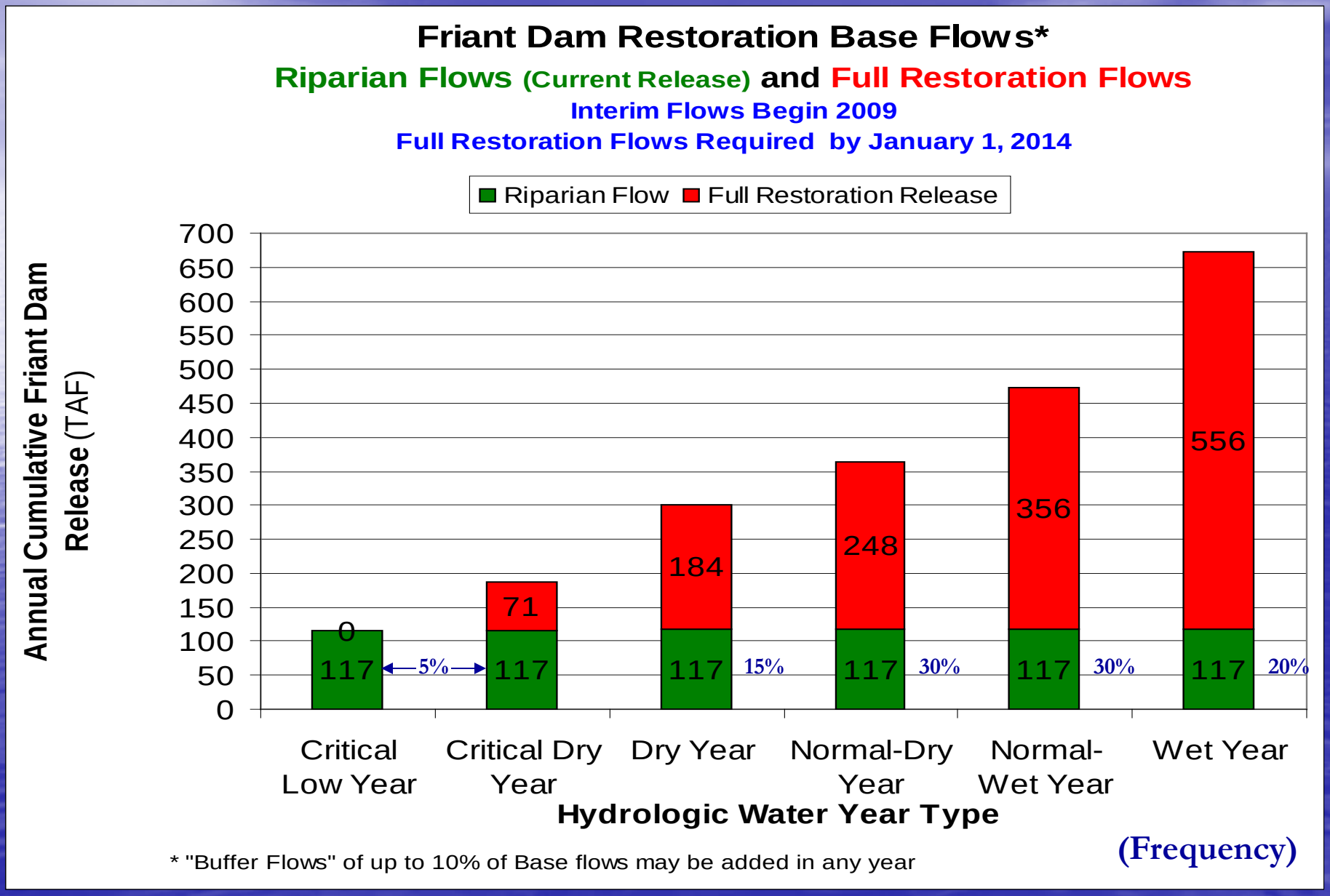
Benefits to:
Friant Water Contractors

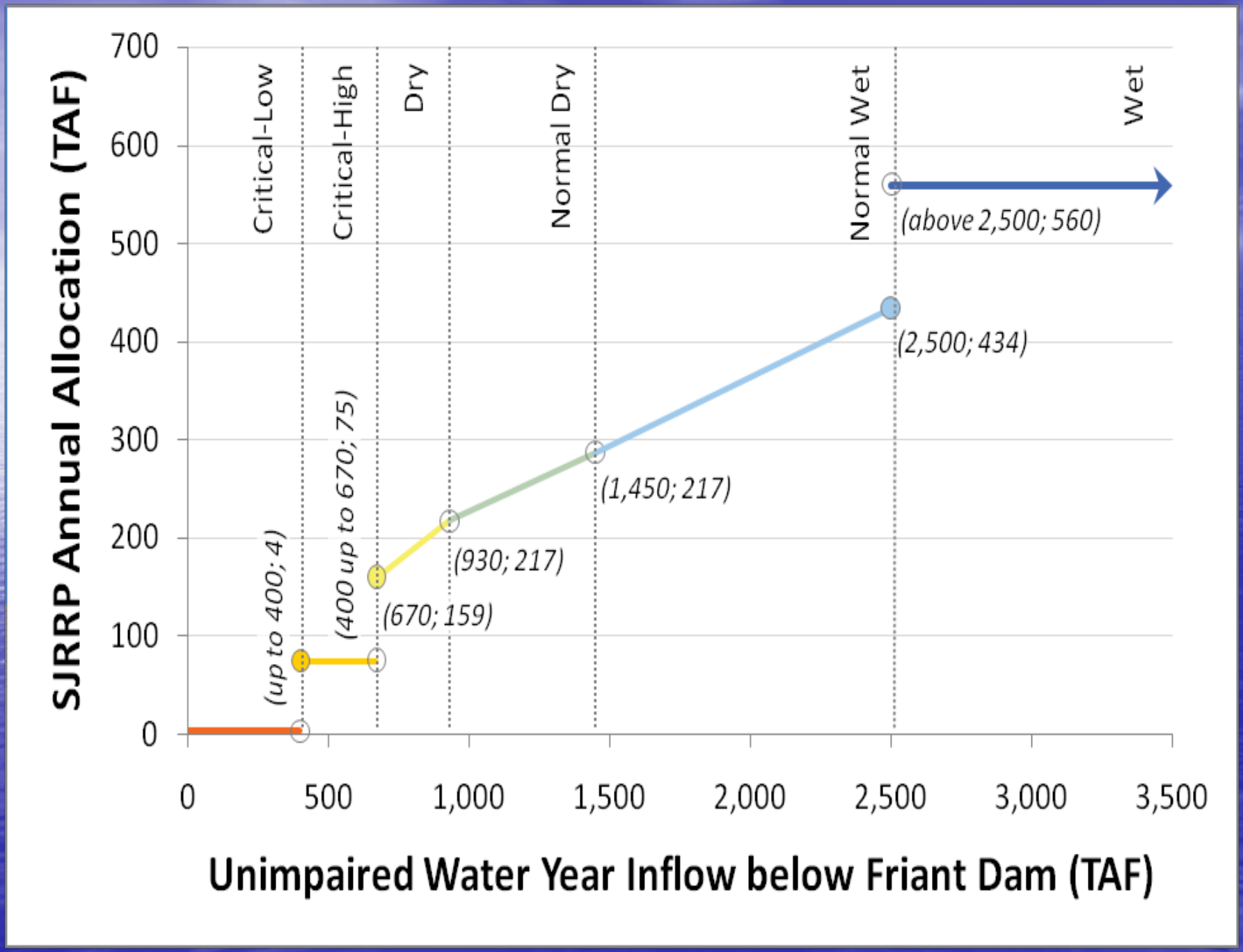
- Approximately 150,000 Acre Feet additional average annual water supply
- Replaces majority of water potentially lost To SJR River Restoration (est. of 200kaf/year) Saving thousands of jobs and nearly $300MM in average annual crop production
- Enhances groundwater and conjunctive use programs (WQ improvement also a regional benefit)

SJR Restoration Sections



Restoration Flows




SJRRP Annual Allocation (TAF)
700
600
500
400
300
200
100
0
Critical-Low
Critical-High
Dry
Normal Dry
Normal Wet
Wet
(up to 400; 4)
(400 up to 670; 75)
(670; 159)
(930; 217)
(1,450; 217)
(2,500; 434)
(above 2,500; 560)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Unimpaired Water Year Inflow below Friant Dam (TAF)

Water Management Goal

Friant Division

Recirculation: Lower SJR, Delta, Exchanges, Cross Valley Canal, AEWSD

Lake Mclure
Pine Flat Reservoir
Lake Isabella
Millerton Lake
Madera canal
Friant Kern Canal
Canal fixes
F.K.C. Reverse Flow Pumping Stations
AEWSD
Merced River
San Joaquin River
Kings River
Fresno Slough
Kern River
San Joaquin River
Tracy P.P.
San Luis Delta Mendota Canal
Tulare Lake
Mendota Pool
Banks P.P.
California Aqueduct
Cross Valley Canal
Southern California
San Luis Reservoir
Sacramento and San Joaquin River Delta

Main Features

500 C.F.S.	Pipeline Intertie
500 C.F.S.	Reverse Flow Pump Station
250 C.F.S.	Reverse Flow Pump Station
125 C.F.S.	Reverse Flow Pump Station
Project Cost	$12,000,000

Legend

Proposed Conveyance Structures

Proposed Pump Stations

Concept: A - 1 Date: 1-20-07

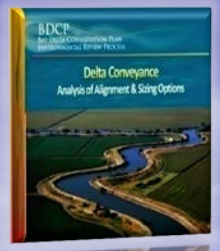
FRIANT WATER USERS AUTHORITY

Drawing Not To Scale

Salmon Translocation

Benefits to: San Joaquin River Restoration and delta ecosystem

- Enhance cold water for Salmon below Friant
- Flow management for fisheries
- Flexibility in delta operations
  - Pump shifting
  - EWA type water
  - Flood protection for SJR and delta improvements
- Mitigate climate change effects (Floods)



New Delta Conveyance Tunnel Alignment

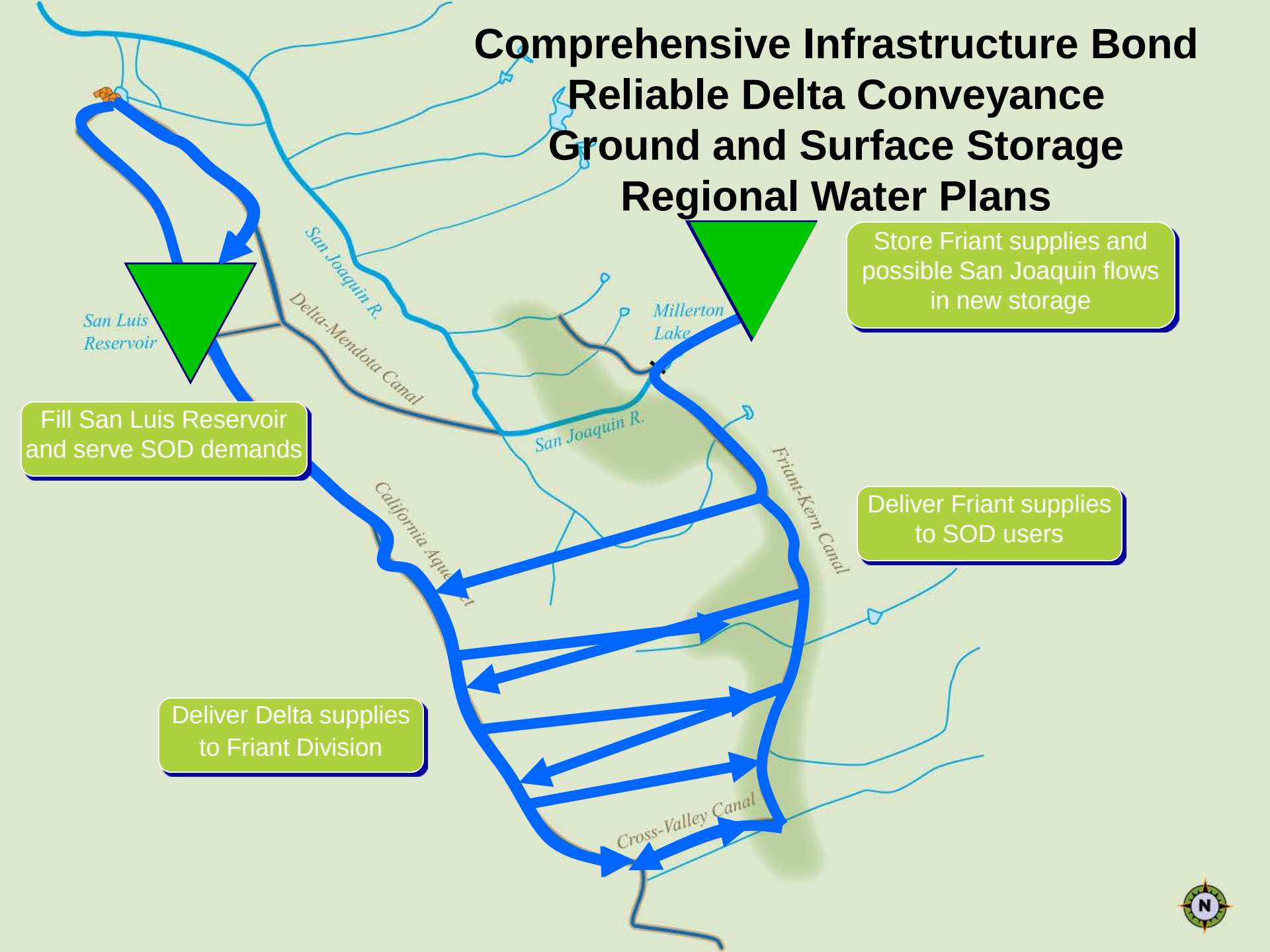
Importance of the Delta to Friant

- 884,000 AF of Exchange Water, which if not met, could come from Friant Supplies
- 128,000 AF of Cross Valley Supplies in Friant Division
- 200,000 AF of SJR Settlement Recirculation Water
- Equitable allocation of costs relative to Benefits

Benefits to:
Delta Export Water Agencies

- Additional Storage in Wet Years to balance against dry year shortages
- Emergency Supply-Storage south of Delta
- Enhance Water Quality for urban users

Comprehensive Infrastructure Bond
Reliable Delta Conveyance
Ground and Surface Storage
Regional Water Plans



Challenges of Surface Storage

- Cost: $2-3 Billion estimate – includes temperature and hydro generation replacement components
- State Water Bond to fund public benefits
- Federal funding component
- Partnering with Export and other Interests
- Environmental legal challenges

Status of Studies

- Appraisal level studies completed
- Value engineering underway by USBR
- Feasibility studies underway for stand alone operation
- Feasibility for integration pending due to delta issues and impact on integration
- Delta operational flexibility being pursued via BDCP

Temperance Flat Particulars

- Nearly 1.3MAF storage capacity
- Dam built in existing reservoir
- Relatively benign footprint
- Neutral Hydropower impact, possible peaking
- Cost estimates are declining significantly
- 150kaf for Friant Division
- 0 – 100+kaf for SOD contractors, delta integration
- Cost per a/f dependent on integration/public benefits

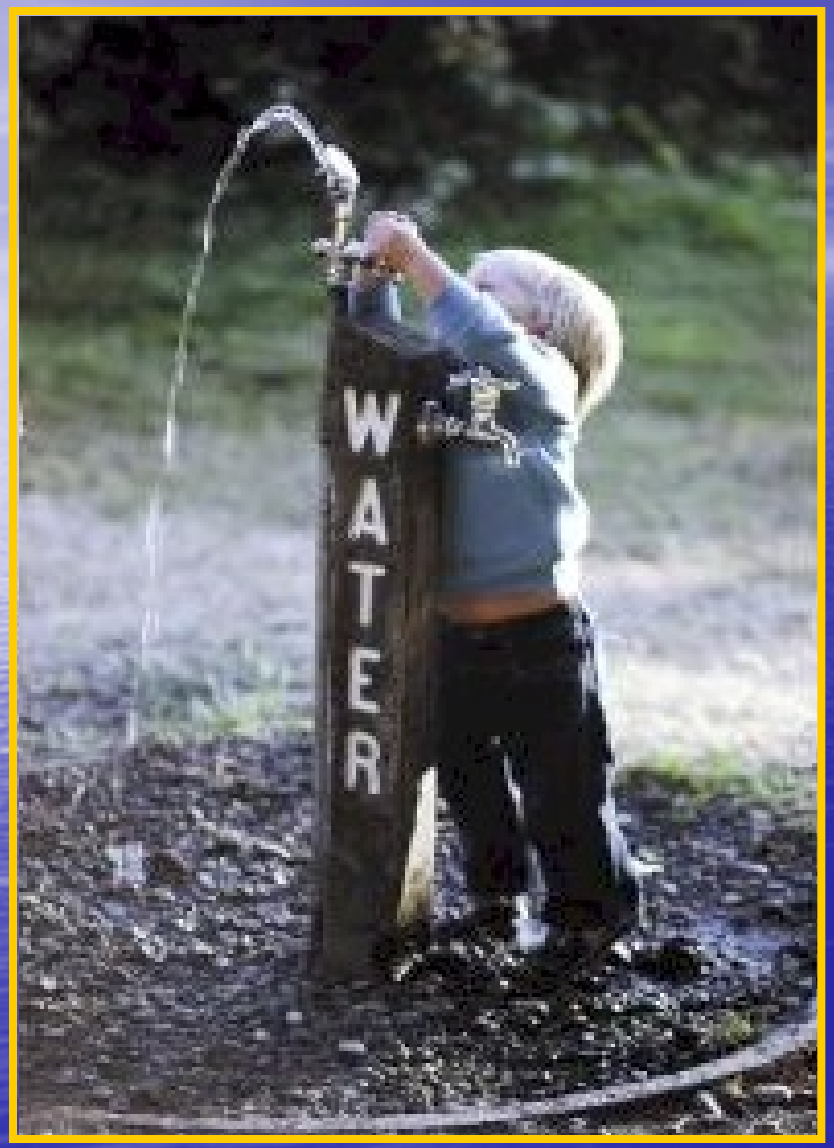
Temperance Flat RM 274 Reservoir Can Provide a Wide Range of Benefits

- Agricultural Water Supply Reliability
- Urban Water Supply Reliability
- Urban Water Quality
- Flood Damage Reduction
- Hydropower
- Recreation
- Emergency Water Supply
- Ecosystem

2014 State Water Bond

Key areas of interest:

- Funding for delta resolution
  - Ecosystem
  - Water Supply
- Support for Regional Management Plans
- Storage Development



Questions?

FINAL

Approved by ACWA's Board of Directors on Sept. 27, 2013

Statewide Water Action Plan for the Governor and the State of California

California's complex water management system is facing unprecedented challenges. Local investments in water supply reliability and ecosystem health have built upon the legacy infrastructure projects that served us well in the past, but the backbone water supply system we rely on today no longer satisfies the state's needs. California's statewide water system cannot respond effectively to our growing population, changing ecosystem needs, increasing flood risks and consecutive years of drought. Climate change and its impacts on public safety and long-term water supply reliability also pose a significant challenge to this generation of water and flood managers.

These problems are extraordinary, and their solutions will require an extraordinary commitment from state, local and federal agencies. They also will require a more evolved regulatory approach that will allow the system to operate efficiently and predictably to meet 21st century water supply and ecosystem needs.

The state has recognized the need for action in venues and initiatives such as the Department of Water Resources' (DWR) California Water Plan, the Delta Stewardship Council's Delta Plan, and the multi-agency Bay Delta Conservation Plan (BDCP). Now California's public water agencies are stepping forward to recommend this set of principles and actions to enhance these individual efforts and integrate them in a comprehensive Statewide Water Action Plan. Our recommended plan, submitted to the Governor for his consideration, provides context for a Delta solution and other critical actions as components of a broader set of strategies to address overall water supply reliability and ecosystem health in California.

When implemented together, this suite of statewide actions will serve as a sustainable path forward for California. Governor Brown's leadership and commitment will be central to the success of this action plan and to moving water policy forward in California.

I. Guiding Principles for Implementation of the Statewide Water Action Plan

1. **Long-term water supply reliability and improved ecosystem health** are the core objectives of this statewide water action plan. In the course of achieving them, however, we must ensure that one region's increased reliability does not adversely affect another's near- or long-term water supplies.

2. A **new regulatory approach** is essential to reflect today's realities and better serve the needs of California water users and the ecosystem. This is critical if we are to reduce scientific uncertainty and incorporate new understanding of operational and ecosystem dynamics. Under the current approach, regulatory agencies tend to focus only on their specific goals, resulting in duplicative and contradictory requirements that fail to deliver benefits to our water supply, water quality or ecosystem. To combat this, state agencies should commit to using collaborative processes as extensively and transparently as possible to achieve regulatory goals in a way that satisfies water supply, water quality, and ecosystem needs. This new approach should embrace enhanced sharing of data, consistent use of peer-reviewed science (including climate change models), coordinated review under the California Environmental Quality Act (CEQA), and improved integration and coordination of all related processes. This approach will help ensure continued ecosystem protections and increase the water community's confidence that regulatory investments will achieve benefits.

3. **The best available science** should be used to support every action, report or decision made as part of this Statewide Water Action Plan. The science should be inclusive, objective, transparent, and peer reviewed.

4. **Water rights and contract terms**, including area-of-origin protections, are foundational to our water system and should be respected and adhered to whenever projects and initiatives are implemented. State and federal facilities should be operated consistent with the conditions of water rights, contracts, and other entitlements.

5. **Bold actions guided by strong leadership** at the state, federal and local levels are essential for the successful implementation of this action plan. In particular, increased commitments by federal partners are needed to ensure the plan moves forward. The Department of Water Resources should provide leadership and support for these efforts from the department's highest level.

6. **Financing:** The state should fund investments that provide broad public benefits such as improved water supply reliability, water quality and ecosystem health. The state should also incentivize local projects that advance statewide water priorities and require public assistance to be cost effective.

II. Statewide Actions

To be most effective, the following suite of statewide actions should be implemented as a comprehensive package. Indeed, many elements – including a Delta conveyance solution – are much more likely to succeed if they are part of a broader action plan. Statewide support for the action plan is essential. Advancing all elements of the plan simultaneously will help secure and maintain that support and build a statewide coalition capable of achieving these ambitious goals.

1. **Storage:** California's water infrastructure has proven inadequate to meet the state's needs in a two-year drought, let alone a multi-year drought. This deficiency, coupled with the already measurable effects of climate change, makes construction of new storage facilities and expansion of existing storage imperative. A wide range of options should be on the table, including new surface water projects; re-operation and expansion/enlargement of existing storage projects; groundwater and conjunctive use; and development of other local and regional storage facilities. Additional storage will add flexibility to the water management system and help ensure a more reliable water supply to serve California's diverse needs, including drought resilience and ecosystem protection (e.g., improved temperatures and flows for fish).

   Actions

   - **Studies**. In coordination with DWR, the responsible state, federal or local water agency proponents of projects should complete storage studies by June 2014 and formally determine whether a particular project is environmentally and economically sound and will provide benefits for water supply and the ecosystem.
   - **Permitting**. Within six months of a local determination based on these studies, DWR and the California Department of Fish and Wildlife (CDF&W) should begin coordinating with local agencies to expedite permitting and CEQA compliance for new storage facilities. For storage projects found to have statewide benefit, DWR and CDF&W should take the lead in expediting the permitting process. The state also should coordinate with federal agencies as needed on permitting, the National Environmental Policy Act (NEPA), water rights issues and potentially construction.
   - **Financing**. Under comprehensive water legislation enacted in 2009, the California Water Commission is tasked with defining and quantifying the public benefits of water storage projects eligible for funding with state dollars. By June

2014, local water agencies that would receive identifiable water supply benefits from water storage projects should provide a plan outlining their commitment and steps they will take to pay for those benefits. This Statewide Water Action Plan recommends that any water bond that moves forward in 2014 provide for continuous appropriation of funding for the public benefits of storage as outlined in the bond measure currently slated for the November 2014 ballot.

- **Construction**. By January 2018, construction should commence for new groundwater and surface water storage projects with an initial target of 1.5 million acre-feet of new storage capacity, as documented in the 2000 CALFED Record of Decision.
- **Local Construction**. As soon as practicable, construction of local facilities with a target of 1 million acre-feet should be completed.
- **Reoperation**. DWR should complete its study of reservoir reoperation by June 2014, including reoperation of existing reservoirs and integration of new storage into system operations.

2. **Water Use Efficiency:** Water conservation and water use efficiency are central elements of the state's strategy to enhance water supply reliability, restore ecosystems and respond to climate change and a growing population. It should continue to be the state's policy to encourage investments in water conservation and water use efficiency by ensuring that the right to conserved water remains with the conserving entity. Local and regional water agencies have made significant multi-decade investments in water conservation and water use-efficiency activities and continue to do so under new state requirements enacted in law. The state should acknowledge that local agencies are in the best position to determine compliance with these requirements and should respect local determinations as sufficient.

   Actions

   - The state should provide funding for water use efficiency activities in disadvantaged communities and support programs that are not locally cost effective but contribute broad benefits to California.
   - DWR and local water agencies should coordinate with groundwater management agencies where applicable to enhance conjunctive use opportunities and minimize potential impacts on groundwater recharge that may result from water use efficiency and conservation efforts.

3. **Water Supply Assurances:** California law establishes a goal of improving water supply reliability throughout the state. Water supply reliability in regions that rely on water conveyed across the Delta is of obvious importance to the California economy. A BDCP is being developed in part to improve and protect water supply reliability for the agencies that will benefit from its completion. However, it is important that these improvements be accomplished in a manner consistent with this principle.

   When the Central Valley Project (CVP) and the State Water Project (SWP) were built, assurances were incorporated in their authorizing statutes that water needed to meet present and future beneficial uses in the areas of origin (i.e., the Sacramento Valley, the east side of the San Joaquin Valley and the Delta) would be available to those areas when needed. All of California has benefited from these fundamental assurances. The state should commit to implementing an action plan that augments storage and modifies regulatory approaches to ensure that positive storage balances can be maintained at all times to provide for improved water supply reliability and ecosystem health and protection of the state's economy.

   Actions

   - As the state implements this plan, all relevant agencies should adhere to water rights protections in state law and comply with existing water rights and contractual requirements.
   - The Administration should continue to affirm through its policies and actions that the implementation of a BDCP will not adversely affect existing water rights of those in the watershed of the Delta, nor will it impose any obligations on area-of-origin water users, including in the Delta, to supplement flows in and through the Delta.
   - Those seeking to secure permits for a BDCP will be responsible for meeting all applicable conditions in their BDCP permits, including any obligations in those permits for Delta flow, which as required by law must avoid redirected impacts to area-of-origin water users, including in the Delta, unless provided for in voluntary agreements or settlements.

4. **Operational Assurances:** Recent modeling indicates that, in the driest 10% of years, some major reservoirs will hit "dead pool," the condition in which water levels fall below a dam's lowest outlets and no operable storage exists to deliver water for supply, environmental, and power generation purposes. The ramifications of hitting dead pool at that frequency could be catastrophic for water users who rely on these facilities for a

portion of their supply, for the environment, and particularly for affected water agencies that do not have another viable source of water supply for their customers.

Allowing reservoirs to reach dead pool is not sound policy and is at odds with overall efforts by the state and federal governments to address California's water supply reliability and ecosystem health. Adaptive strategies that address this issue are critical to ensure that the operational rules for California's water delivery system will provide the water supply assurances needed by water users throughout the state. It should be the policy of the state to adopt regulations, develop operating rules, or take other actions that will ensure that reservoirs are not drawn to dead pool conditions, even in multiple dry years.

Actions

- The Administration should develop a strategy in coordination with state agency leadership and federal agency partners by January 1, 2015, to ensure reservoirs are not driven to dead pool levels. This strategy should identify needed regulatory changes, infrastructure improvements including increased storage capacity, and changes in reservoir operations, as well as support for additional local resources development.
- Initial actions identified through this process that can be implemented prior to January 1, 2015, should be included as part of the report outlined in the Governmental Coordination section of this Statewide Water Action Plan.
- As part of this strategy, the Governor should direct state agencies to implement new and existing water management and water quality programs in a manner that will help ensure California's reservoirs do not reach dead pool conditions.

5. **Improved Regional Self-Reliance**: In addition to water use efficiency and water conservation, California's water agencies utilize a variety of methods to increase local water supplies and reliability for water users and the environment. The state should continue to support development of local and regional water resources that improve each region's water supply reliability and, where applicable, augment imported water supplies. This includes surface water diversions for in-basin uses, conjunctive use, stormwater capture, recycled water, desalination, and groundwater cleanup. Projects and programs that achieve multiple benefits should be a priority.

Actions

- Local agencies should improve self-reliance by planning and implementing projects consistent with decisions made by local and regional water agencies.
- DWR should consult with local and regional agencies to develop a statewide strategy to improve regional supplies, in accordance with the Sacramento-San Joaquin Delta Reform Act.
- The state should continue to support Integrated Regional Water Management Plan (IRWMP) efforts that successfully provide for regional and local needs.
- DWR should work with existing IRWMP programs and stakeholders to evaluate the state's Integrated Regional Water Management program and identify areas for improvement, including streamlining the application process, developing specific criteria to determine successful plan implementation, and reducing transaction costs. This effort should include ways to enhance the program's effectiveness in serving disadvantaged communities in IRWMP-eligible areas.

6. **Headwaters:** Because nearly all of the state's water supplies originate in California's headwaters, more effectively managing these areas is integral to optimizing the water supplies that nature provides. Adapting to climate change and improving watershed resiliency to reduce the likelihood of catastrophic wildfires and increase water yield and quality will require substantial investments by the state.

   Actions

   - State land and resource management agencies with jurisdiction in headwaters areas should draft a joint report to the Governor and the Legislature analyzing the impacts of climate change on headwaters. The report should identify the benefits that headwaters currently provide, identify models to assess the impacts of climate change on these resources and outline strategies to adapt to those impacts. The appropriate state agencies should invite their federal agency partners to participate in the development of the report.
   - The Natural Resources Agency, in consultation with the Sierra Nevada Research Institute (UC Merced) and the U.S. Departments of Agriculture and the Interior, should provide a report to the Governor outlining and prioritizing investments that can be made on public lands to improve the condition and functions of California's headwaters to benefit water supply reliability for the state.

- Working with local agencies, the state should assess and support solutions for legacy issues affecting water quality and supply to improve the condition of affected watersheds.
- The state should seek to partner with the U.S. Forest Service in meadow restoration projects that can control excessive soil erosion and sediment delivery in California's watersheds to help maintain reservoir storage capacity, reduce flood risks and increase conjunctive use capability.

7. **Water Quality:** Protecting water quality is a critical aspect of water management in California. The state should continue to pursue actions to protect, maintain and enhance surface water and groundwater quality for all applicable beneficial uses, consistent with meeting all applicable standards, agreements and regulatory requirements.

   Actions

   - The Department of Public Health should fund the development and use of new analytical methods and cost-effective treatment technologies to better detect and remove chemical and microbial contaminants from drinking water supplies.
   - The state should provide funding support for local water agencies to develop and implement salt and nutrient management plans that will reduce salinity in surface and groundwater supplies and provide enhanced conjunctive use opportunities.
   - The State Water Resources Control Board and the Regional Boards should review and better match water quality standards to the locally appropriate and demonstrated use of the water. Water quality program expenditures should be focused where they will provide the greatest water quality benefits. Source water quality for municipal uses should continue to be protected.
   - The state should continue to develop solutions for assisting disadvantaged communities that do not have safe drinking water.

8. **Bay Delta Conservation Plan:** A Delta solution, including a BDCP, is a critical component of a broader set of actions that will address water supply reliability and ecosystem health in California.

Actions

- Within the scope of existing regulatory statutes, all state agencies involved in developing a BDCP should exercise their discretion and authority to ensure the final project is consistent with the principles of this Statewide Water Action Plan.
- A Delta solution is expected to provide substantial public benefits, which will be funded from public sources including a revised 2014 water bond. The state should work with its federal partners to secure long-term, non-reimbursable federal funding to pay for the federal share of these public benefits.
- Any large construction project, including a BDCP, may have adverse impacts related to the project's "footprint." Where feasible, a BDCP should be designed to avoid or minimize adverse impacts in the first place. When adverse impacts cannot be avoided, the permittees of a BDCP should mitigate project-related environmental impacts, including water supply impacts, in accordance with existing law.
- The permittees of a BDCP, including the Central Valley Project and State Water Project contractors, should work collaboratively with other water users in good faith on all statewide water issues to find mutually acceptable solutions on the broader statewide water issues.

9. **Levee Improvement and Maintenance:** Levees in the Delta and throughout California are key features of the state's water system and are subject to many risks, including those associated with earthquakes and floods. To protect against and prepare for future levee failures, the state should continue to support and prioritize the maintenance of levees in accordance with state law, including critical near-term actions and the Central Valley Flood Protection Plan.

   Actions

   - The Delta Stewardship Council should complete its prioritization plan by July 1, 2014.
   - The state should continue to support DWR's Delta Levee Maintenance and Special Projects programs and provide support for local flood protection measures throughout the Central Valley by partnering with local agencies in projects that can incorporate public benefits.

10. **Emergency Preparedness and Public Safety:** Recent events in California and other states have demonstrated that water-related emergencies can have significant impacts

and put public safety at risk. A robust emergency response plan is essential for minimizing disruption due to floods, earthquakes, wildfires, power outages or contamination of drinking water supplies. The state, working with federal partners, should continue efforts to improve response strategies to enhance public safety during these unforeseen events.

Actions

- DWR should implement pertinent recommendations of the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report of 2012.
- To reduce the risk of catastrophic wildfires, the California Department of Forestry and Fire Protection (CAL FIRE) should review and, if necessary, revise relevant state regulations to better accommodate and effectuate the use of forest management tools such as forest thinning, biomass removal and controlled burns that reduce fuel loading.
- DWR should coordinate with the California Governor's Office of Emergency Services and the U.S. Army Corps of Engineers to ensure public safety in the Delta and upstream will not be compromised by actions that might otherwise degrade the performance of flood management facilities; create or redirect hydraulic impacts; or, interfere with or impede flood facility improvements, operations or maintenance.
- DWR should implement the pathway strategy adopted in its draft Delta Flood Emergency Preparedness and Response Plan and supported by the U.S. Army Corps of Engineers. This effort includes all measures to facilitate restoration of an emergency freshwater pathway to water export facilities in approximately six months.

11. **Bay-Delta Water Quality Control Plan:** Multiple regulatory agencies, including, but not limited to, the State Water Resources Control Board (State Water Board), National Oceanic and Atmospheric Administration (NOAA) Fisheries, U.S. Fish and Wildlife Service (USFWS), CDF&W, U.S. Environmental Protection Agency (USEPA), DWR, Army Corps of Engineers, and the Delta Stewardship Council are tasked with making decisions affecting California's water supplies. Continued coordination among these agencies is essential to avoid duplicative and possibly conflicting policies and regulations, and to make the most efficient use of the state's resources. Negotiated programs and planning efforts have been and likely will be the most effective tools to protect beneficial uses in the Bay-Delta. The State Water Board has the opportunity to lead this coordination through its

review and update of the 2006 Water Quality Control Plan (Bay-Delta Plan). In its review of the Bay-Delta Plan, the State Water Board should:

Actions

- Encourage and facilitate negotiated programs, planning efforts and settlements that will implement flow and non-flow actions consistent with the need to protect beneficial uses and public trust balancing.
- Require a tri-annual review of water quality objectives and implementation accountability through annual reports by local agencies, state offices, departments and boards with responsibility to implement the Bay-Delta Plan.

12. **Water Bond:** Significant investments in California's water infrastructure, water management improvements and ecosystem health are critically needed and long overdue.

    Actions

    - The water bond currently set for the November 2014 ballot should be modified, consistent with the ACWA Board of Directors' Water Bond Policy Principles, in early 2014 to ensure its placement on the November ballot. An appropriately crafted general obligation bond can fund broad public benefits associated with investments identified in this Statewide Water Action Plan. Priorities for funding should include new surface and groundwater storage; local and regional projects that support greater regional self-sufficiency; investments in Delta ecosystem restoration; safe drinking water projects and water quality improvements; water conservation and water use efficiency; and watershed management.

13. **Groundwater Resources**: Many regions of the state rely on groundwater for a significant portion of their water supply. In recent years, climate change, regulatory restrictions on surface water supplies, and increased demands have forced greater reliance on groundwater as a principal or supplemental supply for urban, agricultural and environmental uses. More sustainable management of groundwater is needed, but in order to succeed the state must invest in improvements to its water storage and Delta conveyance infrastructure to optimize both surface and groundwater supplies. Consistent with ACWA's strategic policy document, *Sustainability from the Ground Up: A Framework for Groundwater Management in California*, the state should support and incentivize effective local and regional groundwater management, resolve conflicting

state regulatory requirements and streamline its policies to optimize and increase surface and groundwater storage opportunities.

Actions

- DWR should convene a multi-agency workgroup with participation by local groundwater agencies to coordinate, review and facilitate implementation of local and regional groundwater management performance objectives.
- Groundwater recharge, banking and conjunctive use projects are critical to the future sustainability of California's groundwater resources. DWR and State Water Board (and Regional Boards) should support and facilitate these activities when programs are implemented as part of an IRWMP or legally recognized groundwater management plan.
- DWR, in consultation with other agencies that gather data, should develop a single data portal on a publicly accessible website for groundwater quality information. DWR also should continue to expand the CASGEM database for groundwater quantity.
- The state, through the Regional Boards, should support and incentivize local agencies' efforts to develop long-term, sustainable solutions for cleanup of existing groundwater contamination and prevention of future contamination.

14. **Water Transfers**: Water transfers can provide much-needed flexibility in meeting water supply and environmental needs and have proven invaluable in dry years and droughts. A well-defined set of policies and procedures that provide certainty to transferring parties is essential to facilitate future transfers and promote local and statewide economic, social and environmental sustainability.

    While federal and state laws promote transfers, DWR's current approval processes should be streamlined. These issues should be resolved as expeditiously as possible so water transfers can be implemented quickly – when they are needed – without adversely affecting third parties.

    Actions

    - DWR should convene stakeholder meetings, including with the U.S. Bureau of Reclamation, to identify and resolve, at a minimum, the following issues by December 1, 2013:
        - Identify a process to expedite transfers within a region;
        - Assess the role of CEQA in water transfers,

  - Review DWR and Reclamation processes and criteria that are used to determine what water is transferrable; and
  - Investigate and review contracting practices within Reclamation and DWR for approving agreements to use conveyance and storage facilities of the Central Valley Project and the State Water Project.
- DWR also should review the 2002 SWRCB report, *Water Transfers Issues in California*, for background and relevant recommendations to further facilitate water transfers.

15. **Governmental Coordination:** For this plan to be successful, improved coordination among state agencies and between the state and federal government will be critical.

Actions

- The Governor and state agency leadership should follow up with their federal counterparts, including the President, to assess actions, policy direction and commitments in response to the memo from the President's Council on Environmental Quality (CEQ) to his cabinet directing that a BDCP be a priority for the Obama Administration. The state should further coordinate with federal agencies to advance other actions identified in the CEQ memo, including conservation and water use efficiency, enhancing water supplies and storage, and facilitating water transfers during times of shortage.
- The secretaries of the Natural Resources Agency, California Environmental Protection Agency and the Health and Human Services Agency, in coordination with their respective boards, departments, offices, councils, commissions and conservancies that have a role in implementation of this plan, should produce within 90 days of the Governor's approval of this plan a joint report that details how the agencies and entities they oversee will exercise their authorities to implement this plan in an expeditious and integrated manner.